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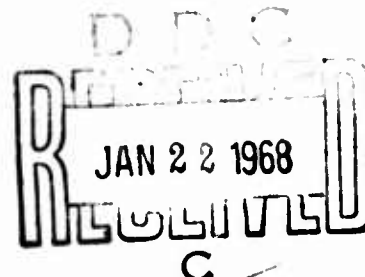
DEPARTMENT OF THE ARMY  
HEADQUARTES 459TH SIGNAL BATTALION  
APO 96240

SCCVNG-NT

14 February 1967

SUBJECT: Operational Report for the Quarterly Period Ending 31 January  
1967, RCS CSFOR-65

TO: Commanding Officer  
21st Signal Group  
APO 96240



SECTION I

Significant Organization or Unit Activities

1. General: a. The 459th Signal Battalion (CA) was stationed at Fort Huachuca, Arizona on 16 March 1966 when warning orders were received alerting the battalion for overseas deployment. The battalion, organized under TOE 11-85E series, was under the operational control of the 160th Signal Group, a sixth US Army Element. The TOE authorized an aggregate strength of 37 officers, 3 warrant officers and 775 enlisted men broken down as follows: Headquarters and Headquarters Company, TOE 11-86E, 13 officers, 3 warrant officers and 111 enlisted men and four letter companies, TOE 11-87E consisting of 6 officers and 166 enlisted men each. There were no additions, deletions or modifications to the applicable TOE authorized by USCONARC or DA.

b. When alerted, the battalion was at 32% of authorized TOE strength due primarily to repeated levies for personnel to fill deploying units. Personnel requisitions were prepared and submitted through channels on 28 March 1966 and the majority of the enlisted filler personnel for the battalion arrived on station in June 1966. The most significant personnel problems that were encountered were: Indiscriminate use of the restrictive clause in an individual's orders (see Section 2, Part I) which resulted in a number of personnel arriving without families (which meant an additional separation for them of up to six months) and a DA overfill on personnel requisitions which increased battalion strength to 1100 men in June 1966 which placed a heavy administrative burden on the battalion and group personnel sections. The problem of family separations was never fully resolved although higher headquarters, to include 160th Signal Group, Fort Huachuca, Sixth US Army, USCONARC and ACSFOR, DA were advised of it. The increased separation created hardship and morale problems which could have been avoided had each individual concerned been made aware of the

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fact that the battalion was not to deploy for several months after their arrival. It was impossible for the battalion to give these personnel the necessary guidance because orders and the individual in most instances arrived on station concurrently. Partial solutions were effected by transferring some personnel who were excess to other units within the 160th Signal Group and by diverting others when orders were received sufficiently in advance. The remainder had to be retained due to operational necessity. The problem of overfill was resolved through concerted and organized effort on the part of the battalion and group administrative personnel to effect the necessary reassignments.

c. In the logistics area, the battalion received an issue of 151 2½ ton trucks, M35A2, as replacements for overage over-mileage M-211 2½ ton trucks. The M211 trucks were processed for turn-in, but due to the lack of funds available to Fort Huachuca to transport the trucks to other posts, 72 remained in the battalion motor pool until the main body departed. The extra effort required to maintain these vehicles diverted an already meager maintenance force from more pressing POM matters. It is felt that the installation should have taken over the responsibility for these vehicles upon completion of the technical inspection. This action was both recommended and requested, but a temporary solution did not materialize until after departure of the main body when the remaining vehicles were turned over to 160th Signal Group for ultimate disposition. To date the documents necessary to clear our property books of 110 M-211's have not been received. Follow-up action continues. The battalion deployed overseas short 41 PU-619 generator sets of 98 authorized which are required to power major items of signal equipment. POM requisitions were submitted as required by existing regulations. As of the closing date of this report, none of these generator sets have been received and follow-up action continues in this area also.

2. There are four distinct time frames during the reporting period that this organization engaged in training, troop movements and/or operations.

a. 18 March - 18 June 1966. 94 days were spent in preliminary POM operations, processing of filler personnel, on-the-job training and operational readiness training. POSD was 18 June 1966.

b. 20 June - 31 August 1966.

(1) Advanced Unit Training, 20 June - 27 August, ATP 11-85 (modified), 60 days.

(2) Army Training Test, ATT 11-85, 29 - 31 August 1966, 3 days.

c. 1 September - 24 October 1966.

(1) POR board, equipment readiness and maintenance, packing and loading, 1 - 16 September, 16 days.

1. PERSONNEL AVAILABILITY CODES	2. EQUIPMENT AVAILABILITY CODES
3. AVAIL. AND/OR SPECIAL	

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(2) Pre-deployment leave, 17 - 30 September, 14 days.  
(During this period rail loading was also completed.)

(3) Troop movement, 1 - 24 October, 24 days.

(4) 25 October 1966 - 31 January 1967, operations, 99 days.

3. With regard to the actual POM phase (1-30 Sep) it was recommended that there be a two week recovery period after the ATT in order to perform necessary maintenance of equipment followed by two additional weeks for packing and loading. However, only two weeks were allotted for maintenance, packing and loading. Fortunately the higher echelon shops at Fort Huachuca were extremely responsive and did a remarkable job in assisting this battalion in meeting the established ERD of 15 Sep. There were two problems associated with POM. The first arose from a lack of a port call. Without a port call, rail cars could not be requested. When the Commanding General, Sixth US Army took personnel action, a port call was received, but loading still had to be carried over into the pre-deployment leave phase. This meant that great reliance had to be placed on 160th Signal Group assets since the bulk of the battalion was on leave. Sufficient personnel organic to the battalion had been granted early leave to cover eventuality so that unit representatives were on hand to assist. The second problem arose from a lack of formal POM board at post level. Fort Huachuca Regulation 220-10, POM Processing, is well written publication that was designed to establish a POM board from the various support elements on post. This board was never formally activated and as a result the POM assistance received was obtained through personal contact and then only after the action element was impressed sufficiently to establish that there was a pressing need for assistance. If the POM board had been activated and had followed Fort Huachuca Regulation 220-10, the POM processing would have been smoother and more efficiently conducted.

4. Upon deployment, the 459th Signal Battalion was organized in accordance with TOE 11-85E. On arrival in-country Companies C and D were assigned to the 43d Signal Battalion and the 41st Signal Battalion respectively. The 459th Signal Battalion lost command and operational control of these two companies effective 22 October 1966. The remaining 3 companies of the battalion proceeded aboard the USNS Upshur to Nha Trang where they were off-loaded on 24 October 1966. The 213th Signal Detachment and the 228th Signal Company (RR VHF) were attached to the battalion on 28 October 1966 by 21st Signal Group General Order Number 25.

5. Operations: The advance party of the 459th Signal Battalion consisting of 25 personnel arrived in Nha Trang, Republic of Vietnam, on 15 October 1966. Liaison was effected to coordinate the programmed deployment of the battalion, the establishment of logistical and administrative accounts, and reception of the main body. A battalion site at Camp McDermott was cleared and a portion of the required tentage obtained and erected.

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The main body arrived on 24 October and work was immediately begun on a self-help program of building the cantonment area. The battalion was committed to communications operations on the day following arrival.

a. On 25 October, Company B was assigned the mission of establishing a radio relay terminal, a relay facility and a microwave relay site at Hill 322, Hon Tre Island.

b. On 26 October, 459th Signal Battalion personnel were integrated into the operation of the AN/MTC-9 Nha Trang Long Distance switchboard and the AN/MTC-1 local switchboard, (which were then operated by the 228th Signal Company (RR VHF)), and eventually assumed responsibility for complete operation.

c. On 28th October, the battalion furnished operators for radio relay and carrier equipment, provided by the 228th Signal Company, to establish 2 radio relay systems in tactical support of the 9th Infantry Division (ROK).

d. On 4 November communications responsibility within the geographical area of Son Hoa, Tuy Phu Duc and Hieu Xuong Districts of Phu Yen Province and Khanh Hoa Province, minus that portion of Camlam District South of a line drawn from CP 0040, West to the Khanh Hoa/ Ninh Thuan Province borders was assigned by 21st Signal Group Special Order Number 144 pursuant to 1st Signal Brigade Regulation 10-10.

e. On 13 November, after receipt of the battalion's equipment, (1) the 228 Signal Company equipment was phased out of operation and replaced on site with that of the battalion and the 228th then began an intensive equipment rehabilitation program.

(2) Company A was assigned the mission of providing communications in Nha Trang and Nha Trang North.

(3) The Signal Operations Platoon of Headquarters and Headquarters Company was assigned the mission of providing communications to the Ninh Hoa and Duc My area.

f. On 17 November, Company B was tasked to install a 15 mile spiral-four cable system from Phu Hiep to Vung Ro Bay to be utilized for POL pipeline communications.

g. On 20 November, Headquarters and Headquarters Company transferred one AN/MGC-17 with operating personnel to the 73d Signal Battalion for use at Dalat.

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h. On 23 November, Company B was tasked to install two radio relay systems at Tuy Hoa Air Force Base. These systems were later relayed through Phu Hiep as that site proved to be a better location for the 55 mile marginal path to Vung Chua Mountain at Qui Nhon. Company B was further tasked to prepare microwave tower facilities at Ninh Hoa, Vung Ro Mountain and Tuy Hoa Air Force Base for the microwave system to be installed from Nha Trang to Tuy Hoa Air Force Base.

i. On 29 November, a transportable 600 line Dial Central Office, AN/TTC-28, arrived at Nha Trang to replace the manual AN/MTC-1 switchboard at the Goldfinch site. Company A was tasked with the installation and operational responsibility. The Dial Central Office was cut over on 1 January 1967 with an approximate 50% fill utilizing existing cable and field wire outside plant. Upgrading of the outside plant continues and the final installation phase is planned for completion by 1 March and an 85% fill.

j. On 8 December, Company B was deployed to Phu Hiep and completed an 85 mile motor march to that location without incident. On this same date the 228th Signal Company was assigned the mission for the relay and terminal site at Hill 322, Hon Tre Island, replacing Company B. Over a 3 day period approximately 225,000 pounds of cargo was airlifted to the island by CH-47 (Chinook) Helicopter. The airlifted equipment included 4 each AN/MRC-54 Radio Relay Terminals, 2 each AN/MCC-6 Carrier Terminals, 4 each AN/MRC-29 microwave sets, AB-216 microwave tower sections to complete a 162 foot tower, 3 generator sets, and a large quantity of POL and construction materials.

k. On 22 December, Headquarters and Headquarters Company was tasked to install, operate and maintain an AM/MGC-22 Teletypewriter Terminal which will serve the Nha Trang area as an interim communications center. The equipment was received on 13 January 1967 and is programmed to be in operation by 17 February 1967.

l. On 19 January, Company B was tasked to install at Phu Hiep and AN/MTC-1 switchboard with a multipair cable outside plant. This switchboard will augment the AN/MTC-1 switchboard that is presently installed and operating at an adjacent camp area in Phu Hiep.

m. On 29 January, Company A received the final mission for the reporting period. The Company was tasked to establish a radio relay system to support the tactical Command Post of a ROK Division operating in the vicinity of Nha Trang. This system was installed and operating within 3 hours following arrival of the distant terminal on site.

n. During the months of December and January, a total of four radio relay systems were established with relay through Hon Tre Island and another system terminated at that location. In addition to these radio relay systems, two microwave relays were established at Hon Tre Island operated by personnel of the 518th Signal Company, who are supported by this battalion under the provisions of 1st Signal Brigade Regulation Number 10-10.



## SECTION II

### COMMANDER'S OBSERVATIONS AND RECOMMENDATIONS

#### Part 1, Observations (Lessons Learned)

##### 1. Personnel.

###### Personnel Orders

Item: Personnel reporting to an organization for movement to restricted overseas area with different instructions in their orders.

Discussion: It was the experience in this organization that personnel reporting as replacements between notification of alert and POSD possessed different sets of instructions in their orders. One group of orders contained a statement to the effect that the personnel were assigned to a unit for further movement to a restricted overseas area with no time element specified. The other group of orders contained no restriction. The majority of these two groups arrived on station between April and June 1966, but the organization did not depart station until October 1966. Those who moved their families to a designated location other than on-station, were separated for up to six months before their tour began. Due to security restrictions and lack of advance notification prior to their arrival, incoming personnel could not be advised regarding expected deployment date.

Observation: All personnel levied for assignment to an organization alerted for overseas movement should be advised, if at all possible, an on or about date of movement to minimize family separations and to assist personnel on deciding on a location for their dependents.

###### Personnel Records

Item: Personnel reporting to an organization without required records.

Discussion: After alert for overseas movement, this organization received approximately 500 enlisted filler personnel from the Southeastern Signal School, Fort Gordon, Georgia. Over 90% of these men reported without Health and Dental Records or FDRF's. A smaller percentage reported without 201 file and Form 20 or assignment orders. The very large number of missing personnel records and deficient pay records resulted in hundreds of wasted manhours.

Observation: A system should be employed at all facilities furnishing replacements in large numbers which will insure that every man going on PCS departs with his entire set of records, and that these records are thoroughly edited for correctness.

###### Personnel On Overseas Orders in Alerted Units

Item: Members of a unit on overseas orders at time of alert.

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Discussion: When this organization was alerted there were many members assigned who were already on overseas orders. Confusion resulted from the fact that no definite guidance was readily available as to which of the personnel in this category, if any, would deploy with the unit. Considerable correspondence was necessary to have members deleted from orders and retained for deployment with the organization.

Observation: When an organization is alerted, the warning order should state that all members on OS orders after a certain date will deploy with the unit.

#### Pinpoint Distribution

Item: Publications received from pinpoint distribution.

Discussion: Remote site locations and a general lack of DD & DA Publications in-country is an ever present problem. Pinpoint distribution is a must for keeping publications current.

Observation: Every unit requiring publications should establish a pinpoint account as soon as possible after receiving alert orders.

#### Publications

Item: Sufficient copies of in-country publications dealing with personnel.

Discussion: A complete set of all regulations from each higher headquarters through USARV which deal with personnel matters are necessary at unit level and should be obtained early. Unless applicable references are available, personnel actions may be delayed and inaccurate reports submitted.

Observation: Deploying units must be provided a complete package of higher headquarters in-country personnel publications prior to departure from CONUS if possible.

#### Forms

Item: Sufficient copies of blank forms.

Discussion: Since many USARV forms are required for use in-country, it is necessary to obtain a list of forms and examples from the sponsoring unit as soon as possible. All forms that are reproducible should be reproduced in CONUS. The suggested 30 day supply is inadequate to meet requirements in-country and deployment with a 90 day supply is recommended. It is important to acquire a list from the sponsoring unit in-country as soon as possible so that a basic load of forms can be programmed and obtained.

Observation: An ample supply of all forms required is mandatory to fulfill in-country reporting requirements.

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### Pre-Deployment Leave

Item: Programming pre-deployment leave.

Discussion: The time frame in which personnel are allowed leave prior to shipment overseas, normally the last two weeks prior to OS movement, could result in problems at organizational level such as an inadequate working force being available for loading equipment, transferring station property, performing the numerous details required of an organization departing CONUS and in the packing and shipment of household goods and relocating dependents.

Observation: A planned phasing of pre-deployment leave will reduce problems in moving equipment and aid personnel in making arrangements for relocating his family.

## 2. Operations.

### Operational Commitments

Item: Operational commitments following arrival in-country.

Discussion: Operational commitments as a rule will be placed on a unit before its equipment arrives in-country. After the arrival of organic equipment commitment can be expected within 72 hours. Therefore, plans need to be prepared in advance to deprocess the equipment from shipping and prepare it for commitment.

Observations: Sound planning prior to arrival of organic equipment will insure immediate responsiveness to operational commitments. Sponsoring units should provide the incoming unit as much advance information as possible in this regard.

### Operation of Non-TOE Equipment

Item: Signal units can expect to operate equipment not authorized in its TOE.

Discussion: Shortly after arrival, this battalion assumed responsibility for operation and maintenance of a Switchboard, AN/MTC-9, modified for plug supervision long distance trunking. Although the AN/MTC-9 is similar to the organic AN/MTC-1 switchboard, the switchboard operators were not trained on modified plug supervision or in the operation and maintenance of the associated AN/TTA-6 signal converter. The battalion also installed a 600 line Dial Central Office, AN/TTC-28, which is not organic to its TOE. The associated outside plant consisting of multipair cable was installed by organic field wiremen who had no prior training in splicing multipair cables. A Teletypewriter Terminal, AN/MGC-22, was also issued to the battalion to install and operate. The AN/FGC-25 teletypewriter equipment contained therein was an entirely new piece of equipment for operator and maintenance personnel.

Observation: It would be desirable to have qualified personnel accompany the non-TOE signal equipment when it is issued to a unit. However, this is not always

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possible, therefor units knowing sufficiently in advance of departure of new equipment that they will operate and maintain should establish training classes in CONUS or obtain school trained personnel. After arrival in-country a strong OJT program is a must. Qualified personnel are available within the 1st Signal Brigade to assist in conducting battalion or unit level OJT and there are several formal courses of instruction established by brigade for which quotas are available.

#### Development of New Sites

Item: Planning for new communications sites.

Discussion: When a new signal site is being established, all requirements for the site should be included in the development plan. On too many occasions, the emphasis has been on the communications aspects. Units must include in the overall planning requirements for billeting, water and POL storage facilities, clearing of the site for physical security, and perimeter lighting. The installing unit in attempting to obtain these items finds out that the supporting service units do not have a requirement to assist the signal unit as the signal site is not included in any of their directives. The end result is that the installing signal unit must beg, borrow and scrounge the required items.

Observation: Adequate planning and coordination is required at higher headquarters when a new isolated signal site is being planned. The required logistical support should then dovetail with the establishment of the new site.

#### Concept of Deployment

Item: Deployment of a Combat Area Signal Battalion will differ from its TOE mission.

Discussion: A Combat Area Signal Battalion is organized to provide area communications. This battalion is providing both area communications and direct tactical support communications. The area communications is being provided in a major troop area for service and support units that are in a static situation. However, radio relay and carrier teams are deployed down to operating infantry battalions to provide tactical communications.

Observation: Tactical signal units can expect to provide communications support not covered in its TOE mission.

#### Radio Relay Antenna Fields

Item: AN/TRC-24 radio relay antenna field.

Discussion: The AN/TRC-24 radio relay antenna field area can be greatly reduced by the use of telephone poles at semi-permanent sites. Cross arms are placed on 50 foot poles with the cross arms being braced from the top. An eye-bolt is placed at each end of the cross arm and the antenna pulley is attached to each eye-bolt. The antenna is then attached to the pulley

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and is raised up to the cross arm. The antenna can then be safety chained to the cross arm. The azimuth and stability of the antenna is maintained by use of the storm guy cables that are normally employed. This system allows rapid component change, ease of azimuth selection and further permits the introduction of tilt where required to meet optimum operating conditions on obstacle gain and/or major elevation change shots.

Observation: The use of telephone poles at semi-permanent radio relay sites facilitates lowering and raising of antennas and requires less space where real estate is a problem.

#### Army Aviation Support

Item: Requirement for Army Aviation support.

Discussion: The mission and deployment of this battalion dictates that rotary-wing aircraft be available at all times for command and control, emergency logistics resupply, remote recon, and liaison purposes. The battalion is dispersed over a large area and road travel is not always feasible. Some of the remote sites are inaccessible during portions of the year except by air. If boat service is not available to an island site, resupply by air is the only means. The availability of aviation support from group has been limited because of heavy commitments and missions requested from non-signal aviation units in the area receive a low priority in comparison to their tactical support missions.

Observation: Without Army Aviation support, difficulties are experienced in command and control, emergency resupply, remote recon and liaison. The end result is that the battalion can not perform its mission as effectively as it could if Army Aviation support was readily available. The assignment or attachment of an aviation section is considered to be essential and MTOE action has been initiated by this battalion.

#### Prevention of Fuel Contamination

Item: Power outages due to fuel contamination.

Discussion: Power failures due to contamination of fuel are inexcusable. Reasonable care in handling, storage and use of the fuel can prevent contamination from occurring. The following measures should be considered:

- a. Insure that all bungs and caps are tightly secured on drums and cans that are not in use.
- b. The fuel container that is in use should be tipped at an angle to allow rain to drain off rather than enter thru the opening. This also permits water and sediment to settle to the lowest point in the container.
- c. Feed lines or pipes should be of such a length so as not to reach to the bottom of the container, even if improperly inserted. Any water or sediment in the bottom of the container will not be pumped up the feed line or pipe.

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d. All containers MUST be drained completely prior to being refilled. This will prevent a build-up of water and sediment over a period of repeated refillings.

e. A trap or sediment bowl should be placed in the feed line before the connection to the generator. This additional trap will assist in collecting contaminants before they get to the fuel filters and sediment bowls on the generators. This trap should be drained daily.

f. Drain the fuel filters and sediment bowls on the generators daily.

Observation: Through the use of proper procedures and care, fuel contamination need not be one of the primary reasons for power failures.

#### Generator Operating Procedures

Item: High deadline rate of generators.

Discussion: The high humidity, dust and sandy conditions in RVN have contributed to an increase in the deadline rate of generators. Wind borne sand and dust have an abrasive action on the stator and internal windings in the electrical portion of the generator causing an insulation breakdown. When the generator is shut down, the high humidity in the air tends to condense on the stator and internal windings. When the generator is restarted and is brought up to normal RPM and voltage output, the condensed moisture causes shorting and arcing over and thus burns out the stator and the windings. Correct operating procedures can reduce the chances of these malfunctions happening. They are:

a. When starting a generator, the circuit breakers should be OFF and the voltage adjustment should be at minimum setting. The generator should be started and run just above an idle for approximately 5 - 10 minutes. After the generator has run for the warm-up period bring it to proper operating RPM and frequency then turn the voltage adjustment in stages to increase the voltage output. Observe the voltage output meter. Between adjustments, there may be a noticeable rise in the voltage output. This is an indication that the stator and wiring are being dried out and are beginning to function properly. When adjusted to the desired level a load may be placed on the generator.

b. When a generator is taken off load, reduce the RPMs to an idle for about 10 minutes to allow the generator to cool internally before being shut down.

c. Experience has shown that gasoline driven 5-10 KW generators operate more efficiently if run on a 6 hour on, 6 hour off basis with oil being changed every 50 hours and oil filters every 100 hours. In the case of 15 KW diesel generators, they may be run for 50 hours with an oil and filter change (both oil and diesel filters) every 100 hours. For 45 KW and larger diesel generators, 100 hours of operation followed by an oil and filter change (both oil and diesel filters) every 100 hours. In all cases com-

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plete operator maintenance must be performed during generator down-time to insure that they are ready for use at all times.

Observation: Allowing generators to warm-up and brought to operating voltage slowly coupled with longer operating periods and sound maintenance practices will provide more reliable power and result in greater generator life.

### 3. Training and Organization

#### Radio Relay/Obstacle Gain

Item: Training on obstacle gain systems with AN/TRC-24 Radio Relay equipment.

Discussion: During the training phase prior to deployment the radio relay teams trained primarily on line of sight systems and conducted very little training on obstacle gain systems. A few long systems over 60 miles were established during the training period, however, those systems were line of sight. The available terrain in-country is such that the desired locations for siting radio relay equipment is not available. Factors to consider in conducting obstacle gain radio relay systems training are:

a. The preferred obstacle should be knife-edged and located in the middle third of the planned path of the system.

b. Exact equipment siting is vital. Moving the antenna as little as 50 feet from the planned location may improve the signal readings.

c. Selection of frequencies is critical. A-band and B-band frequencies are the most reliable, but at a few locations, C-band frequencies have proven to be the best to use.

d. Horizontal polarization is the type normally employed. However, if the system quality is poor, changing to vertical polarization has in some cases improved the system quality.

e. Frequency changes can be expected about every third month. Experience has shown that climatic and seasonal changes are contributing factors and a frequency change of about 100 channels seems to correct a poor system.

f. Obstacle gain systems should not be established in the proximity of an active airfield as the control tower radios have a tendency to interfere with reception.

g. Antennas should be rotated to pickup the strongest signal. The resultant azimuth may not always correspond with the planned azimuth.

Observation: Obstacle gain systems are the rule rather than the exception in RVN and should be incorporated in the field training exercises for deploying signal units.



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### Training Exercises

Item: Duration of training exercises.

Discussion: The battalion had programmed into its training plan a series of 3 day field training exercises. The shortness of these exercises proved to be unsatisfactory in attaining the desired training. By switching to 6 day field training exercises much better training results were obtained. There was sufficient time available to correct problem areas while in the field and thus attain greater operator proficiency.

Observation: For better training results, field training exercises should be a minimum of 6 days in duration.

### Army Training Program (ATP)

Item: Length of time allocated to unit training prior to deployment.

Discussion: This battalion was allotted 10 weeks for basic unit and advanced unit training. 13 weeks would have been more desirable to insure that teams, sections, platoons and companies were better trained for duties in Vietnam. Every effort was made to gain the most out of each hour of training available and all companies successfully passed the ATT and the battalion was rated "combat ready". However, the battalion had an approximate 80% fill of new personnel the majority of whom had just completed ALT. Also, all personnel had not arrived on station when the training cycle started. The compression of training time coupled with the above factors resulted in a lower proficiency level than would have been the case had 3 additional weeks of training time been available.

Observation: Units preparing for overseas deployment must make maximum use of available training time and should be allotted the full time prescribed by the applicable ATP.

### ATT Objectives

Item: The ATT emphasized objectives were not in line with actual mission requirements.

Discussion: The primary communications objective emphasized was the processing and handling of teletype traffic. The use of messenger service was played down. However, the mission requirements upon arrival in-country required that a courier service be established and teletype requirements were almost nil.

Observation: The ATT should be administered to place an "across the board" emphasis on all communications capabilities instead of a few.

### VHF Radio Relay Commitments

Item: VHF Radio Relay Training.



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Discussion: A lack of training areas and availability of frequencies in CONUS in all operational AN/TRC-24 VHF bands may cause some signal units to de-emphasize radio relay training. However, the radio relay commitments in-country are such that units possessing this capability can expect to be fully committed.

Observation: Signal units equipped with a VHF radio relay capability must train their personnel and exercise their equipment to the maximum extent practicable prior to deployment. Emphasis should be placed on team-work, cross-training, operation over difficult terrain, trouble shooting and maintenance.

#### Communications Training Guidance

Item: Deploying signal units require communications training guidance.

Discussion: When a unit is alerted for deployment, the in-country sponsor should furnish the alerted unit as much communications training guidance as possible as to what areas should be emphasized while in a training status. Such guidance as DCA and technical control methods of operation, systems and circuit numbering schemes, etc., would assist a unit in conducting its training in the methods that are ultimately to be used in-country.

Observation: Early receipt of such guidance would enable a deploying unit to better train its personnel to perform assigned missions.

#### Trouble Shooting Techniques

Item: Communications trouble shooting techniques.

Discussion: The use of sound, isolation type, trouble shooting techniques are required in team, section and field training. Too often when a system or circuit is malfunctioning, the operator does not know what to do or what to look for when trouble shooting. In many instances he will report trouble at the distant end when the trouble is actually in his equipment. If he does not know what is wrong he will in some cases not do anything rather than ask for assistance. Training should be geared so that all operators are fully abreast of sound trouble shooting techniques and the need for accurate trouble reporting.

Observation: With correct training in proper trouble shooting techniques and accurate trouble reporting, considerable time and effort can be saved in restoring communications.

#### Recovery Time

Item: Recovery time following the ATT for maintenance and packing prior to deployment.

Discussion: The time permitted this battalion for recovery after the ATT was not sufficient to perform the require maintenance before packing and

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deploying. A signal battalion should have a minimum of 2 weeks recovery time to be devoted strictly to the maintenance and processing of equipment for overseas shipment. After this 2 week period, the packing can be started to be followed with the actual loading out of the equipment. Even though the maintenance, packing and loading of the equipment was accomplished, there were just too many things happening too fast for sufficient and detailed attention to be paid to all.

Observation: After the ATT, units selected for deployment should be programmed for a minimum of 2 weeks recovery time prior to the packing.

#### Switchboard Training

Item: Switchboard training prior to deployment.

Discussion: During the training phase prior to deployment, the traffic load placed on switchboards is generally insufficient to train the switchboard operators for the heavily loaded switchboards in-country. A realistic switchboard loading plan needs to be incorporated in unit training. This plan should place an 80% load of traffic on the switchboard and be provided within the unit's own resources. This plan can be readily accomplished through the use of loader teams at each site. These teams will then place a preplanned number of calls to various subscribers each hour, with peak hours incorporated into the plan.

Observation: Proper switchboard training and incorporating well prepared loading plans will result in operators being capable of coping with heavy in-country traffic loads.

4. Intelligence. The 459th Signal Battalion is organized to perform minimal functions in the intelligence area, primarily in the administrative field of security clearances. Intelligence information pertaining to the areas in which the battalion operates is obtained from higher headquarters and the intelligence sections of the major headquarters in the areas being provided communications by the battalion.

5. Logistics.

#### CONEX Utilization

Item: Utilization of CONEX containers for temporary parts storage/issue facilities.

Discussion: Newly arrived units must have ready access to their PLL parts for maintenance of equipment until their fixed facilities are constructed.

Observation: CONEX transporters containing PLL parts should be configured with shelving and containers which provide ready access to these parts prior to departure from CONUS.

#### Equipment Density Lists

Item: Preparation of equipment density lists.

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Discussion: Newly arrived units in Vietnam have a requirement to submit initial reports under AR 711-5/711-140 and to provide their direct support unit with an equipment density list.

Observation: Deploying units should bring adequate copies of a machine printout of their current materiel holdings to facilitate initial reporting upon arrival in Vietnam.

#### PLL Listings

Item: Requirement for Prescribed Load Listings

Discussion: Units maintaining Prescribed Load Lists IAW AR 735-35, including signal items, have a requirement to submit three copies of these lists to their support unit for editing and initiation of support stockage.

Observation: Deploying units should prepare their PLLs in sufficient quantity to permit submission to support immediately upon arrival in Vietnam. This will minimize the time delay incurred for support to obtain the required stockage and enable the supported unit to keep their equipment deadline rate at a minimum.

#### Suspended Ammunition

Item: Suspended ammunition lots.

Discussion: Deploying units shipping suspended lots of ammunition as their basic load are placing an added burden on the ammunition supply system as well as incurring an arrival delay in the procurement of current lots.

Observation: Deploying units should insure, through close liason with the CONUS ASP, that ammunition packed for shipment as basic load is not on the suspended list.

#### Supply Address Codes

Item: Supply address codes.

Discussion: Prior to October 1966 a unique system of supplementary supply activity address codes was employed in Vietnam. This resulted in following shipments to deploying units being delayed pending assignment of these codes.

Observation: Deploying units should be advised that their CONUS supply activity address code (supplementary address), normally their unit identification code, utilized for property book identification, will remain unchanged in Southeast Asia. Military installations making shipments under the provisions of Change 3 to AR 220-10 will be able to effect immediate shipment of supplies without loss of identification of the gaining unit.

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#### Hand Tools

Item: Requirement for hand tools.

Discussion: Newly arrived units in Vietnam generally have a requirement to undertake a considerable amount of construction under the auspices of the engineer self help program.

Observation: Deploying units should be advised to bring an adequate amount of hand tools of all types so that construction will not be impeded for lack of tools.

#### Class 1 Basic Loads

Item: Expiration of Class 1 basic loads.

Discussion: Climatic deterioration of C rations in Southeast Asia causes basic loads of these foodstuffs to expire in two years or less from date of manufacture. Units employing CONEX containers for basic load storage are particularly susceptible because of the temperature rise inside the CONEX when placed in the tropical sun.

Observation: Deploying units should insure that the basic load of rations packed for shipment are the most recent available at their CONUS installation.

#### Signal Shelter Painting

Item: Tropical painting of signal shelters.

Discussion: Implementation of tropical painting for signal shelters as announced by USAECOM in March of 1966 has resulted in minimal equipment failures from overheating. Interior temperature reduction averages 15 degrees by prevention of solar heat absorption.

Observation: All signal units deploying to Southeast Asia should have the tropical paint applied to their shelters prior to shipment.

#### Cargo Security

Item: Cargo security guards.

Discussion: Deploying units have experienced equipment losses of their TOE/TDA equipments which normally do not accompany troops. These losses have occurred at numerous intermediate ports as well as after arrival of the equipment in Southeast Asia.

Observation: IAW AR 220-10 all commanders of deploying units should have their equipment accompanied by organizational guards. These personnel should be familiar with all organizational equipment in its shipping configuration and be equipped to check the security and quantity of the shipment throughout the shipment period.

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#### Intransit Losses

Item: Intransit losses of minor accessories.

Discussion: Many deploying units have suffered intransit losses of OVM and similar items. In these cases this equipment was boxed and secured to the vehicles in an attempt to maintain equipment integrity and to make these items readily available at the POD.

Observation: At the expense of equipment integrity commanders of deploying units should be advised to secure canvas, OVM and similar material in CONEX or other containers during shipment. Any box or bundle chained or strapped to a vehicle is very susceptible to pilferage.

#### CONEX Packing

Item: CONEX packing requirements.

Discussion: CONEX's packed by deploying units with inadequate bracing and waterproofing have resulted in unnecessary equipment/supply losses. It can be expected that a large majority of CONEX's shipped from CONUS will experience extreme exposure to physical shock, water and high temperatures enroute to Southeast Asian locations.

Observation: Commanders of deploying units should emphasize and practice adequate CONEX packing procedures. A rule of thumb: can this CONEX be tipped in any attitude, dropped 12-15 feet and/or placed in water up to 3 feet without damaging the contents?

#### Bracing of Signal Shelters

Item: Interiors of signal shelters which require bracing for shipment.

Discussion: Selected signal shelters like the AN/MCC-6, AN/MRC-54, AN/MRC-69 which contain heavy rack mounted equipments risk damage in shipment if not adequately braced on the interior. Wooden lattice networks which prevent the racks from being tipped toward the aisle of the shelter will preclude equipment breakway intransit.

Observation: Commanders of deploying units should be advised to insure that adequate bracing in signal shelters is employed wherever potential torque forces would cause equipment to be damaged by breaking loose in transit.

#### Equipment Marking

Item: Distinctive Equipment Marking.

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Discussion: Southeast Asian ports are crowded with equipments being staged for shipment to recently arrived units. Organizational staging parties will be able to obtain, identify and move their equipment much more efficiently if this equipment, in its shipping configuration, is distinctively marked.

Observation: Prior to effecting shipment of organizational equipment each shipping container should be marked with a singularly distinctive design or color to facilitate identification enroute. Some techniques which have been used are painted corners, greek letters, geometric designs approximately 6" square and diagonal colored stripes.

#### Notification Procedures

Item: Notification procedures for alerted units.

Discussion: DA warning orders affecting tenant units on class II military installations are normally addressed to the CG of the installation. By definition, the installation CG does not share a command relationship with the tenant unit other than basic housekeeping. This inferred relationship of command operational control as a result of the warning order address may lead to compound misunderstandings, inaction and unprogrammed, unnecessary delays in effecting the multiple actions required by the alerted unit.

Observation: Warning orders or similar correspondence leading to a changed in the status of units should be directed through the affected unit's operational command channel for unit action and concurrently through installation command channels to effect prompt and efficient action at all echelons.

#### POM Funding Impediments

Item: Selected units funding problems associated with POM.

Discussion: Class I tenant activities on class II installations are dependent upon the disposition of the installation for funding support to normal post functions in the engineer, transportation and services areas. A tenant unit requiring the expenditures for materials and services associated with POM necessarily must receive the required support if the movement deadline established by DA is to be met efficiently and effectively. Class II installation budgets do not normally include sufficient reserve to accommodate the additional expense.

Observation: DA warning orders should include specific funding information to enable an alerted unit to respond effectively without incurring the additional burden of prolonged intercommand correspondence and liaison for release of funds. This will enable the supporting installation to procure additional material, pay necessary civilian overtime and accommodate additional transportation costs related to the alerted unit's POM.

## Section II

### Commander's Observations and Recommendations

#### Part 2, Recommendations (lessons learned)

1. Personnel. The initial stages of preparation of the unit for deployment after receipt of warning order, and the degree of success attained by the unit in initiating and carrying out the training program were greatly affected by the administrative requirements incident to the deployability status of personnel. These administrative requirements were compounded by the amount of conflicting regulations at all echelons of command. There is a need for a clear, definitive, all encompassing policy at Department of The Army level, governing the deployability criteria for assigned and filler personnel of alerted units which will minimize collating directives at unit level and reduce correspondence necessary to determine deployability. This would assist units in achieving a reasonable degree of stability, particularly in regard to these personnel assigned to supervisory positions at the initial and most critical period of preparation for overseas movement.

2. Operations. A most significant area having a direct impact on the ability of the battalion to respond to in-country mission requirements is the introduction of new and unfamiliar non-TOE equipment and the necessity for extremely short "required to be in service" reaction times. The degree of responsiveness and reliability of tactical and administrative communications is directly related to the degree of training and equipment shakedown. Concurrent with unit acquisition of equipment, the assignment of qualified personnel for the purpose of providing technical advice and operator training would do much to alleviate problems encountered, particularly during the critical pre-installation and actual installation phases.

/s/ Kenneth R. Symnes  
KENNETH R. SYMNES  
LTC SigC  
Commanding

21  
SCCVNG-SY (31 Jan 67)

1st Ind

SUBJECT: Operational Report for the Quarterly Period Ending 31 January 1967 (RCS-CSFOR-65)

Headquarters, 21st Signal Group, APO 96240 25 February 1967

TO: ACSFOR, Department of the Army, Washington, D. C. 20310

1. Transmitted herewith are two copies of Headquarters, 459th Signal Battalion Report, Subject: Same as above.

2. Concur with observations made by CO, 459th Signal Battalion with exceptions noted below.

3. Reference personnel records (Page 7). This Headquarters has initiated action through command channels to insure that personnel replacements do arrive at new units with records. This acute problem has increased during the past quarter in that a greater percentage of personnel have arrive without records.

4. The observation for Cargo Security guards (page 20) is one method of resolving the pilferage problem and should be adequate.

5. Units committed immediately upon arrival.

a. Personnel and unit must be as well-trained as possible in CONUS.

b. Training should be in rugged terrain if possible.

c. All Combat Area Signal Battalions should train some personnel in cable splicing techniques of FIC cable.

6. It is undesirable to immediately commit a new unit in-country. Training should be conducted prior to employment.

7. Training in LSQ-73, MGC-22, MGC-23 and TTC-28 would be desirable in CONUS if equipment is available (even though not on TOE). However, it is realized that until equipment becomes available, training must be accomplished in Vietnam. Experienced personnel on training teams must be made available to units receiving new item of equipment.

8. Most battalions within the 21st Signal Group operate remote Signal sites which are accessible only by rotary wing aircraft. The 21st Signal Group does not have the density of helicopters to support six battalions adequately.



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1st Ind

25 February 1967

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9. It is understood that present planning within the 21st Signal Group for subsequent LTOL submissions will include an Aviation Section comprised of at least three helicopters for each assigned battalion. It is felt that three helicopters will easily accomplish the mission of logistical support and communications restoration within each battalion.

10. Generator maintenance is a major problem for the 459th Signal Battalion. The weather conditions, high humidity, heat, and wind-blown sand and dust, continue to plague the generator systems in that unit. Fuel is contaminated by dirt and water. Steps are being taken to eliminate as much of the problem as possible.

HUTTEN L. SHARP  
Colonel, SigC  
Commanding

90  
SCCVOP (13 Feb 67)

2d Ind

SUBJECT: Operational Report for the Quarterly Period Ending 31 January  
1967 (RCS CSFOR-65)

HEADQUARTERS, 1ST SIGNAL BRIGADE (USASTRATCOM), APO San Francisco  
96307 17 MAR 1967

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DH  
APO 96307

Commanding General, USASTRATCOM, Washington, D. C. 20315

1. IAW AR 1-19, subject report from the 459th Signal Battalion is forwarded.
2. Concur in Commanders' Observations as modified by 1st Indorsement with the following comments:
  - a. Item: Personnel Records (Page 7). A similar problem exists in-country which is caused primarily by diversion of incoming personnel. Extra effort is made by the Brigade Assignment Team to insure personnel records are properly marked and forwarded. In cases where records are not received prompt followup action must be taken.
  - b. Item: Communication Guidance. Brigade Regulation 612-1, Reception and Processing of Incoming Units is being changed to incorporate the observations of the Battalion Commander.
3. Concur in the Commander's Recommendations.

FOR THE COMMANDER:

/s/ William A Higgins  
WILLIAM A. HIGGINS  
Colonel Sig C  
Deputy

AVHGC-DH (13 Feb 67)

3d Ind

26 APR 1967

SUBJECT: Operational Report-Lessons Learned for the Period Ending  
31 January 1967 (RCS CSFOR-65)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96307

TO: Commander in Chief, United States Army, ATTN: GPOP-OT  
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the period ending 31 January 1967 from Headquarters, 459th Signal Battalion as indorsed.

2. Pertinent comments follow:

a. Reference item on pinpoint distribution, Part 1, Section II, Page 8: Nonconcur. Accounts with the publications centers in Baltimore and St Louis should be established upon activation and prior to the time the unit deploys to RVN. Upon receipt of destination orders, unit has only to submit change of address notification. DA publications will be sent direct to unit's new destination.

b. Reference item on publications, Part 1, Section II, Page 8: Nonconcur. Publications packets are furnished each separate battalion and larger size unit for information and guidance prior to deployment to RVN. Resupply of USARV publications are obtained by submitting a DA Form 17 (Requisition for Publications and Blank Forms) through normal publications supply channels to this headquarters, ATTN: AVHAG-AP. Requisitions are filled and returned within 48 hours. A requisition was submitted by 21st Signal Group on behalf of the 459th Signal Battalion for 5 copies of all USARV regulations and circulars. Requisition was filled and shipped to 459th Signal Battalion on 21 February 1967.

c. Reference item on forms, Part 1, Section II, Page 8: Nonconcur. USARV blank forms are automatically distributed between the 20th and 30th of each month based on usage factors. Each major subordinate command will develop and consolidate usage factors for USARV forms based on a 60 day supply. Major subordinate commanders that do not maintain a publications supply point may delegate authority to commanders of brigades, groups, support commands, and battalions to report usage factors direct to this headquarters for the purpose of establishing a 60 day stock level. In the case of a newly arrived unit, blank forms should be requisitioned immediately upon arrival in-country.

d. Reference item concerning the planning for new communication sites, Part 1, Section II, Page 10: Since the arrival of the 459th Signal Battalion in RVN, MACV has published a construction bulletin listing all

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facilities required by a unit. USARV is revising its regulation governing Master/Base Development planning to make it more complete. These two documents prescribe procedures which will ensure that requirements of all units are properly programmed. It will remain, however, the responsibility of the using unit to request the facilities it requires.

e. Reference Item on Army Aviation support, Part 1, Section II, Pages 11 and 12, and Paragraph 9, 1st Indorsement: This headquarters recognizes the problems created by the lack of organic aviation; however, until the urgent demand for aircraft to meet combat units requirements is fulfilled, aviation support for combat support and combat service support units must be obtained on a mission basis from local supporting Army Aviation units. Concur with MTOE action. However, since the 459th Signal Battalion is a STRATCOM unit, the MTOE would be forwarded through USASTRATCOM channels.

f. Reference Item on personnel in alerted units on overseas orders, Pages 7 and 8, and Paragraph 1, Page 23: Concur that a definitive policy governing the deployability criteria for personnel in alerted units is desirable.

g. Reference Item concerning the operation of non-TOE equipment, Pages 9 and 10; Paragraph 2, Page 23; and Paragraph 7, 1st Indorsement: Concur. The 1st Signal Brigade is conducting training in the MSQ-73 technical control van. Presently there is also in-country a New Equipment Training Team conducting switchboard training for 1st Signal Brigade units.

FOR THE COMMANDER:

  
STANLEY E. SCHULTS  
Major, AGC  
Asst Adjutant General

26  
GPOF-OT (13 Feb 67)

4th Ind

SUBJECT: Operational Report-Lessons Learned for the Period Ending  
31 January 1967 (RCS CSFOR-65) - Hq 459th Sig Bn

HQ, US ARMY, PACIFIC, APO San Francisco 96558 1 0 JUN 1967

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters concurs in the basic report as indorsed.

FOR THE COMMANDER IN CHIEF:



H. SNYDER  
CPT, AGC  
Asst AG